

## WHY EWELLIX

# Actuators

The future is electric



Ewellix offers a wide range of high performance electromechanical linear actuators, in a variety of designs and setups for both general and specific industrial applications. Electric linear actuators create stable, accurate back and forth movement and can be used in an endless range of applications. If the process involves pushing, pulling, lifting or sliding, a linear actuator from Ewellix can be an energy and cost-efficient solution.

Unlike pneumatic or hydraulic cylinders, electromechanical actuators are flexible, speed can be dynamically set, and can be positioned precisely. In addition, due to a reduced number of components, the whole system is more cost effective, resulting in lower energy use and maintenance costs.

We understand the range of product is vast, so we want to recommend the products we see most commonly used in applications in the industrial market.

### Features

Linear actuators convert electricity into linear motion. Ewellix electromechanical actuators are built with a ball or roller screw mechanism powered by an electric motor and offer great benefits. They can be used in new machine builds and/or replace hydraulic and pneumatic cylinders in existing equipment.

### Common Applications

- Material forming
- Food and beverage
- Machine tools
- Assembly processes
- Medical
- Simulators/hexapods
- Automation

## Ewellix range overview

**Low duty cycles** – duty cycle up to 25-40% at low speeds and forces up to 12 kN

### CAHB actuators

Engineered to operate in severe environments at temperatures from -40 to +85 °C with a maximum duty cycle of 25 % and consist of robust metal gears with corrosion-resistant housings. Seven families of linear actuators, virtually maintenance-free, self-locking up to 2 times the rated load and up to IP69K/66M.



### Matrix actuators

The Matrix series is specially developed and approved for medical applications. It includes powerful linear AC and DC actuators. These run very quietly, take up very little space and can be installed at virtually any angle, both vertically and horizontally.



**High duty cycles** – duty cycle up to 100%, high speed possible, and forces up to 500 kN possible

### CASM 32/40/63

Ideally suited to perform fast and powerful linear movements. Unlike pneumatic or hydraulic cylinders, CASM electric cylinders are flexible and thus can be positioned accurately. Their modular concept enables easy connection to any preferred motor and control systems, considerably reducing design and programming costs.



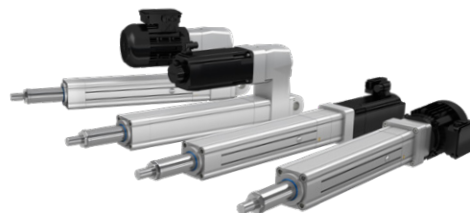
### LEMC

The LEMC series of electric cylinders is designed to replace hydraulic systems. They are equipped with a precision roller screw drive with electric motor and gearbox. This combination results in an actuator with a higher power density than conventional models.



### EMA-100

Ewellix developed an innovative modular electric cylinder platform to address most of the applications in the automation and heavy machinery industries, mainly replacing hydraulic solutions. In this new design, instead of limiting the selection on the “linear unit - gearbox – motor” modules only, Ewellix takes it a step further. The modularity has been extended to the base component level. Within each module, the customer can select the components inside to build a custom-like solution.



## Lifting columns

Lifting columns (also known as telescopic pillars) are a smart solution to implement a lifting function in industrial and medical equipment. They are quiet, robust, and powerful to satisfy the most demanding requirements.



## Applications examples

### Material forming

Electromechanical presses are used for a wide variety of applications including press fitting, stamping or clinching. Larger presses can be used for high precision deep drawing. Ewellix roller screw technology is the best solution to handle the high peak load of those applications and offers the best in class for life time, power density and reliability.

#### Benefits

- Outstanding force repeatability for constant quality
- Easier force and position control
- Longer service life
- Increased productivity
- Lower maintenance cost



### Filling and labelling stations

Automated flexible filling stations are used when food and beverage liquid has to be brought into bottles and cans.

#### Benefits

- No oil and no risk for oil leaks
- Higher productivity and shorter return on investment
- Maintenance free
- Flexibility for multiple setting
- Efficient for less power consumption
- Lower CO<sub>2</sub> footprint



### Simulators and hexapods

Simulators are used to imitate movement behaviour under realistic conditions, be it for scientific, training or entertainment purposes. With the help of multi-axis systems almost all movement patterns can be imitated with high accuracy and reactivity.

#### Benefits

- Low noise
- High motion accuracy and repeatability
- Compactness
- Full flexible motor selection
- Suitable for platforms ranging from a few kg to up to 6000 kg



### Medical: stretchers and physical therapy tables

Adjustable physiotherapy/medical beds promote a safer workplace for the caregiver, allowing the patient to be in a more comfortable position and the caregiver to quickly and easily adjust the height of the bed, the back and leg rest to an optimal level. Actuators make it possible to lift and adjust a position using either a handset or a foot switch.

#### Benefits

- Compact and robust design
- Quiet and smooth
- Energy efficient
- Easy to install and operate



### Building automation

Actuators are installed in many modern buildings. These electromechanical actuators open and close traditional and tilt windows, dome lights, facade elements, blinds as well as smoke and heat extraction flaps, at the touch of a button or automatically, using climate sensors (wind/rain) and temperature and smoke sensors

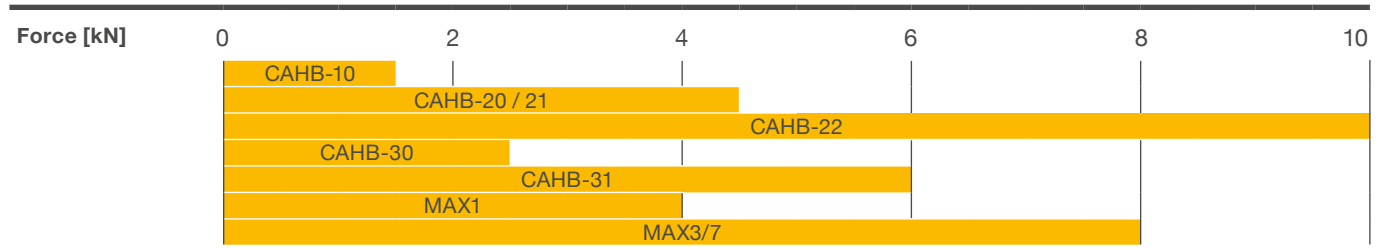
#### Benefits

- Silent and smooth running
- Easy to integrate
- Easy to install
- Economic and cost effective



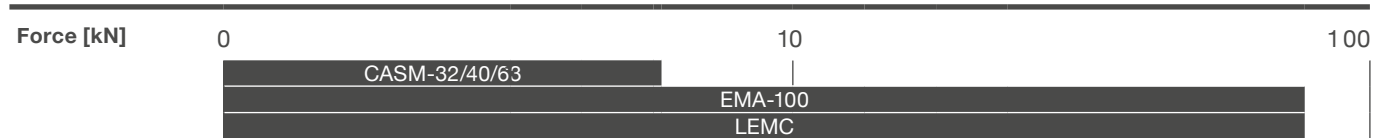
# Range performance overview

## Low duty cycles



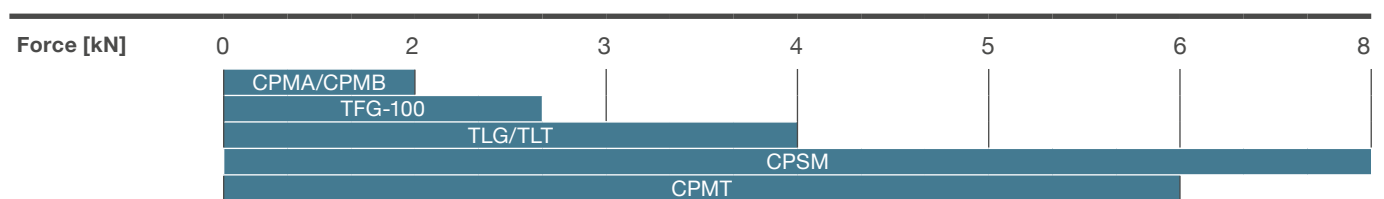
Linear speed	up to 193 mm/s
Stroke	up to 700 mm
Duty cycle	up to 40 %
IP grade	up to 69K
Motor types	12, 24, 36, 48 VDC
Feedback types	Potentiometer

## High duty cycles



Linear speed	up to 1110 mm/s
Stroke	up to 2000 mm
Duty cycle	up to 100 %
IP grade	up to 65
Motor types	24, 40, 600 VDC
Feedback types	Encoder

## Lifting columns



Linear speed	up to 100 mm/s
Stroke	up to 700 mm
Duty cycle	up to 100 %
Bending load	up to 2800 Nm
Motor types	24 VDC / 100, 120, 230, 240 VAC
Feedback types	Encoder

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